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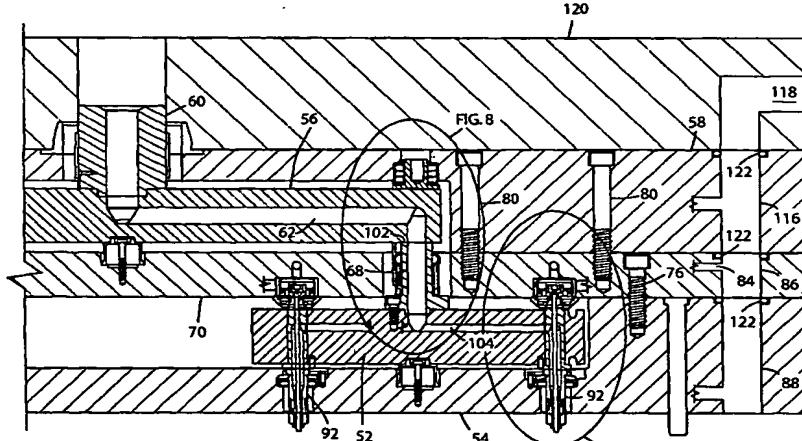
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## (54) Title: HOT RUNNER MANIFOLD SYSTEM



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(57) Abstract: A manifold system (50) comprising a main manifold (56) with a plurality of arms (64), a plurality of sub-manifolds (52) spaced from the main manifold (56) and communicating with the main manifold (56) through a plurality of melt transfer bushings (68) disposed between the main manifold (56) and the sub-manifolds (52). The melt transfer bushings (68) may include static mixers (140) to homogenize the melt. An air plate (70) is disposed between a backing plate (58) preferably housing the main manifold (56) and a manifold plate (54) preferably housing the sub-manifolds (52). The air plate (70) has a plurality of air channels (74) that communicate with valve gate nozzle actuators (90), which are received in actuator cavities (72) in the air plate (70). The air plate (70) is bolted to the manifold plate (54), and the backing plate (58) is bolted to the air plate (70) with bolting patterns not constrained by location of the main manifold (56) or sub-manifolds (52). The manifold system (50), as shown in Fig. 5, has better thermal and geometric balance, closer nozzle spacing, and better bolting for less plate bowing.



VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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